



Anuradha Wickramarachchi

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🔗 Scholar Uid: u-rFXwUAAAAJ

A passionate PhD candidate keen on learning state-of-the art and contributing towards the progress of humanity at large. Capable of teamwork and working under pressure.

EDUCATION

August 2018 – present

PhD Candidate in Computer Science

School of Computing, Australian National University

- Computational biology and bioinformatics

2014 – 2017

BSc (Hons) Computer Science and Engineering

Department of Computer Science and Engineering, University of Moratuwa, Sri Lanka

- GPA of 4.01/4.2
- First class with deans list for all 8 semesters

TRAINING

Stanford Online

Machine Learning

An online non-credit course authorized by Stanford University and offered through Coursera

NVIDIA

Getting Started with AI on JETSON NANO

Offered through NVIDIA deep learning institute

Udemy

PyTorch for Deep Learning with Python Bootcamp

Training on NumPy, Pandas and PyTorch including CNNs, LSTMs and GPU optimization.

PUBLICATIONS

First Author

- **LRBinner: Binning Error-Prone Long Reads Using Auto Encoders**
Anuradha Wickramarachchi, Yu Lin (Accepted for presentation at 21st International Workshop on Algorithms in Bioinformatics; WABI 2021)
- **PlasLR Enables Adaptation of Plasmid Prediction for Error-Prone Long Reads**
Anuradha Wickramarachchi, Vijini Mallawaarachchi, Lianrong Pu, Yu Lin (Under review at PLOS CB, Presented at GLBIO 2021)
DOI: 10.1101/2021.06.14.448306
- **GraphPlas: Refined Classification of Plasmid Sequences using Assembly Graphs**
Anuradha Wickramarachchi, Yu Lin (EEE/ACM Transactions on Computational Biology and Bioinformatics 2021) DOI: 10.1109/TCBB.2021.3082915
- **MetaBCC-LR: Metagenomics Binning by Coverage and Composition for Long Reads**
Anuradha Wickramarachchi, Vijini Mallawaarachchi, Vaibhav Rajan, Yu Lin (ISMB 2020)
DOI: 10.1093/bioinformatics/btaa441

Collaborative Work

- **GraphBin2: Refined and Overlapped Binning of Metagenomic Contigs Using Assembly Graphs**
Vijini G Mallawaarachchi, Anuradha S Wickramarachchi, Yu Lin (20th International Workshop on Algorithms in Bioinformatics; WABI 2020)
DOI: 10.4230/LIPIcs.WABI.2020.8
- **GraphBin: refined binning of metagenomic contigs using assembly graphs**
Vijini Mallawaarachchi, Anuradha Wickramarachchi, Yu Lin (Bioinformatics 2020)
DOI: 10.1093/bioinformatics/btaa180

SOFTWARE/TOOLS

<i>Research Related</i>	Freely available at github.com/anuradhawick <ul style="list-style-type: none">• LRBinner (PacBio/ONT reads clustering tool)• MetaBCC-LR (PacBio/ONT reads clustering tool)• PlasLR (Plasmid classification extension for PacBio/ONT reads)• GraphPlas (Graph based plasmid classification extension tool)• Seq2Vec fast memory mapped sequence vectoriser written in C++ (Boost)• Seq2CovVec fast coverage vector computations for long reads written in C++ and Python
<i>Software Engineering</i>	Freely available at github.com/anuradhawick <ul style="list-style-type: none">• Vinyl.LK (AWS Serverless/Atlas Mongo hosted website for Sri Lankan vinyl records)• YOLO Object Annotation Maker

AWARDS/ACHIEVEMENTS

<i>Academic</i>	<ul style="list-style-type: none">• ANU Merit Fee Remission Scholarship• Deans list for all 8 semesters during BSc• Mahapola Sri Lankan undergraduate scholarship (merit based)• GCE Advanced Level Island Rank 68 (District Rank 4)
<i>Non-Academic</i>	National Awards <ul style="list-style-type: none">• Merit Award - National Best Quality ICT Awards (NBQSA) Oct 2017 (Sri Lanka) for Final Year Honours Project• Merit Award - National Best Quality ICT Awards (NBQSA) Oct 2016 (Sri Lanka) for Taxi Master Project Hackathons <ul style="list-style-type: none">• First place: IDEA Challenge 2017• Google IO 2016 1st Runners up May 2016• First place: IDEA Challenge 2016

SKILLS

<i>Programming</i>	Python, C, C++, JAVA, JavaScript, NodeJS, etc <ul style="list-style-type: none">• Industrial experience in ReactJS, MongoDB, AWS Serverless and AWS developer console.• Research experience in python, C and C++.
<i>Tools/Frameworks</i>	Bioinformatics tools <ul style="list-style-type: none">• Aligners - minimap(2), BLAST+, Edlib, etc Bioinformatics/Programming libraries <ul style="list-style-type: none">• libminimap2, GATK, Edlib, biopython, etc• Boost C++ library Machine Learning <ul style="list-style-type: none">• Tensorflow, Pytorch, Sci-kit learn
<i>Languages</i>	English professional proficiency and Sinhalese native proficiency.

ADDITIONAL INFORMATION

<i>Interests</i>	Blogging, Travelling and Gaming
<i>Referees</i>	Available upon request.